REMARKS

OBJECTION TO THE DRAWINGS:

The drawings were objected to for not showing the driving motor and the driving pulley. Both features were cited in independent claim 1. Figures 2, 3 and 4 show the driving motor 28 and driving pulley. Withdrawal of the objection is requested.

REJECTION UNDER 35 U.S.C. §112:

Claims 1-24 were rejected under 35 U.S.C. §112 ¶2 as being indefinite. The Examiner rejected claim 1 as being unclear or indefinite regarding the limitation of "an automatic tension adjusting part." The limitation of "an automatic tension adjusting part" (ref. 150) is supported by paragraphs 43-44 and figures 9B and 9C. There is a tension adjusting position (see fig. 9B and 9C) located between the spring assembly position and the initial pulley fixing part-assembling position. The automatic tension adjusting part (150) is provided with the elastic pulling spring (151) in order to bias the pulley fixing part. The elastic pulling spring (151) that is part of the "automatic tension adjusting part" (150) has an elastic force set to import the predetermined tension to the carrier transfer belt.

On page 3, the Examiner rejected claim 16 as being unclear on the alleged reasons that there are no structural limitations with regard to the anti-release portion. Support for the structural limitations of the anti-release portion is found in paragraphs 48-49 and in fig. 5 and 6 shown as slide protrusions. The Applicant respectfully submits that the anti-release portion is part of the automatic tension adjusting part (150) as described in paragraph 48. The automatic tension adjusting part (150) is illustrated as the second fixing portion (153 and 112) that prevents the second hook (153) from being released.

On page 3, the Examiner rejected claims 17-18 as being unclear because of the claim limitation "wherein the image forming apparatus is an inkjet printer." Support for the claim limitation "image forming apparatus is an inkjet printer" is found in paragraph 2. An image forming apparatus such as a fax machine or laser printer is a type of image forming apparatus. The limitation of "the image forming apparatus is an inkjet printer" found in claims 17-18 further limits independent claim 1.

Additionally, the Examiner noted that claims 17-18 appear to be a subcombination/combination problem. The Examiner asserted that claims 17-18 limit an inkjet printer, not the pulley fixing apparatus. A restriction for subcombination/combination is proper

when a combination is an organization of which a subcombination or element is a part. See MPEP 806.5(a). The Examiner proposes that the inkjet printer is unrelated to the pulley fixing apparatus. We propose that an inkjet printer further limits "the image forming apparatus" found in the preamble of claim 1. The image forming apparatus is a part of a pulley fixing apparatus. Therefore, claims 17-18 do further limit claim 1.

Also, the subcombination/combination restriction would be improper and untimely at this juncture because of election by original presentation. The subcombination/combination restriction was not raised prior to the first Office Action on the merits. See 37 CFR 1.145 and MPEP 818.01. Even if it were proper to restrict claims 17-18 because they contain a subcombination/combination claims, the restriction should have been given before an Office Action on the merits

On page 4, the Examiner rejected the terms "narrow" and "wide" found in claim 9 as a relative term. The terms "narrow" and "wide" are supported in paragraphs 23-24, 39-40, 47, 60, 62, and 64. The wide hole portions are illustrated in ref. 124a and 124b. The narrow hole portions are illustrated in ref. 125a, 125b, 125a', and 125b'. A person of ordinary skill in the art at the time of the invention would be able to determine the wide and narrow hole widths suitable for protrusion guide holes.

REJECTION UNDER 35 U.S.C. §102:

On page 4, item 6, claims 1-8, 13-15, 19 and 20 are rejected under 35 U.S.C. §102(b) as being anticipated by Holbrook (U.S. 4,969,859). Claim 1 was amended to include the limitation, "wherein the driven pulley is pushed from an inside of the belt when the spring is in tension." Holbrook discusses a pulley positioned inside a belt (69) with the tension assembly located outside the belt. The pulley pulls on the belt from outside the belt. In contrast, the present invention of claim 1 pushes on the belt from the inside. By pushing from the inside a more compact image forming apparatus can be made than with the apparatus of Holbrook. That is, Holbrook does not teach "wherein the driven pulley is pushed from an inside of the belt when the spring is in tension." Holbrook discusses maintaining the tension of the power-transmitting belt. According to Holbrook, if the spring 66 is in compression, it pushes the slide plate 45 outwardly causing the roller 51 to bear against the belt 68, and if the spring 66 is in tension, the slide plate 45 is pulled inward causing the roller 51 to bear against the tension belt 69. That is, the roller 51 pushes the belt 68 outwardly. Thus, Holbrook fails to teach imparting a tension to the power-transmitting belt by a "driven pulley is pushed from an inside of the belt when the spring is in

tension." Support for the amendment to claim 1 can be found at paragraphs 2, 16, 18, 56, and 68 and Figure 6.

On page 5 of the Office Action, claims 5-8 are rejected as being product by process claims. Claims 5-8 recite the structural elements of the pulley fixing apparatus and do not contain method steps. For example, claim 5 recites a "pulley fixing part is movable." This is a structural limitation. There are no method or process steps in claims 5-8. The MPEP requires a recitation of steps when applying a product by process rejection. The Examiner failed to specifically point out which steps, if any, are not given weight because they are process steps found in a product claim. Nevertheless, claims 5-8 do not contain method steps. Claim 5 and dependent claims 6-8 are directed to parts of the pulley fixing apparatus such as the protrusion guide hole, the power-transmitting belt, the pulley fixing part, the spring assembling position and the initial pulley fixing part-assembling position. Holbrook fails to teach the limitation of "wherein the driven pulley is pushed from an inside of the belt" found in independent claim 1. Holbrook is silent on the limitations found in claims 5-8.

Claim 19 is amended to independent form. The Examiner alleges in the rejection of claim 19 that Holbrook shows "a locking part (64, 48, unnumbered hole see Fig 1) to lock the pulley fixing part after the tension of the power-transmitting belt installed on the driven pulley is adjusted." The text of Holbrook in col. 2, lines 18-21 states:

> A bolt 64 is then extended through the slot 21 and slot 48 formed in slide plate 47 to threadably engage the base 60 securing the tension apparatus to the base.

The text of Holbrook does not say that the bolt (64) locks the position of the pulley. Holbrook shows that the bolt (64) secures the tension apparatus (11) and is silent on locking the slide/pulley fixing part. Holbrook in fact teaches away by reciting that "a screw extends through the aligned slots to lodge within a supporting wall such that the screw does not interfere with the sliding motion of the slide member" (col. 1, lines 27-30). In the present invention, a locking part *locks* the pulley fixing part (see: paragraphs 27-28, 50-54, 66; figure 7). Therefore, Holbrook does not anticipate claims 19-24.

REJECTION UNDER 35 U.S.C. §103:

On page 7, item 8, claims 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Holbrook in view of Burgoon (U.S. 5,141,083). The Examiner acknowledges on page 7 of the Office Action that Holbrook fails to teach or suggest "an anti-push portion to

prevent a fixing part from being pushed, having at least one projection/burr to protrude toward the fixing part." Holbrook also fails to teach that a driven pulley is pushed from an inside of the power-transmitting belt. That is, in the present invention, the driven pulley works inside the belt to simplify the structure and the assembly of the pulley fixing apparatus for an image forming apparatus. Therefore, in the present invention, the apparatus can adjust and control the tension of the power-transmitting belt.

Thus, Holbrook, teaches away from the limitations of the present invention.

On page 7 of the Office Action, the Examiner asserts that Burgoon makes up for the deficiencies of Holbrook. Although Burgoon discusses a member that prevents a fixed part from being pushed, this member does not relate to a pulley or the force of a power-transmitting belt. Burgoon fails to teach or suggest "an anti-push portion to prevent the pulley fixing part from being pushed by the driving force of the power-transmitting belt." Burgoon teaches a non-analogous art of a disc brake system. The teachings of Burgoon would not apply to Holbrook because Holbrook is related to a tensioning apparatus for maintaining tension on a belt. Our invention includes a pulley with spring action. The present invention is related to a pulley fixing apparatus that controls the tension of a power-transmitting belt.

Burgoon's teaching relates to interlocking composite materials that will not slip off or away from the protrusion upon subsequent thermal expansion. The force exerted in Burgoon against the protrusions is thermal expansion, not spring action of a pulley. Therefore, Burgoon cannot be relied upon to cure the deficiencies of Holbrook.

Neither Holbrook nor Burgoon, individually or combined, recite "an anti-push portion to prevent the pulley fixing part from being pushed by the driving force of the power-transmitting belt." Additionally, dependent claims 22-24 recite patentably distinguishing features of their own. For example, claim 23 recites "at least one projection positioned at the frame in the vicinity of the threaded hole."

Withdrawal of the foregoing rejections is respectfully requested.

New claim 25 recites that the features of the present invention include "driven pulley pushing from an inside of the belt when a spring disposed between the pulley fixing part and frame is in tension." New claim 26 recites that the features of the present invention include "an assembly positioned inside the belt." Nothing in the prior art teaches or suggests such. It is submitted that these new claims, which are different and not narrower than prior filed claims

distinguishes over the prior art.

CONCLUSION:

In accordance with the foregoing, Applicants respectfully submit that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned agent for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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By: _____

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